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(54) Title: AQUEOUS POLYMER DISPERSION AND PROCESS

(57) Abstract: The invention relates to a process for the preparation of an aqueous polymer dispersion by mini-emulsion polymerisation comprising the steps of (a) forming a mixture comprising (optionally formed as a first aqueous pre-mixture) water and at least one amphiphilic stabilising polymer having a number average molecular weight M_n of 800 to 100,000 and an acid number of 50 to 400 mg KOH/g and (optionally formed as a second organic pre-mixture) at least one hydrophobic co-stabiliser and at least one α,β -ethylenically unsaturated monomer; (b) subjecting this mixture to high stress to form a mini-emulsion comprising stabilised droplets of average diameter from about 10 to about 1000 nm and polymerising the monomer within the droplets. Preferably the mixtures are substantially free of surfactant other than the amphiphilic polymer. Aqueous polymer dispersions so obtained and uses thereof in coatings, films, adhesives and inks are also described.



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